REMARKS

The present remarks are in response to the Office Action of March 21, 2005. Claims 13-16 are currently pending.

Reconsideration of the application is respectfully requested in view of the following responsive remarks. For the Examiner's convenience and reference, the Applicant's remarks are presented in the order in which the corresponding issues were raised in the Office Action.

In the Office Action, the following rejections were made:

(1) claims 13 and 15 were rejected under 35 U.S.C. 102(e) as being anticipated, or in the alternative under 35 U.S.C. 103 as being unpatentable, by U.S. 2004/0171779 (hereinafter "'779"); and

(2) claims 14 and 16 were rejected under 35 U.S.C. 103(a) as being unpatentable over '779 in view of U.S. Pat No. 4,795,794 (hereinafter "'794").

It is respectfully requested that the claims be reconsidered and allowed. No new matter herein or throughout the prosecution history has been added.

Product-by-process claims

As a preliminary matter regarding "product-by-process claims," the Examiner has stated that once a rational is provided tending to show that the claimed product appears to be the same or similar to the prior art, the burden shifts to the Applicant to come forward with evidence establishing a nonobvious difference between the claimed product and the prior art product. The Applicant respectfully contends that this is a misstatement of Marosi and Ex parte Gray, both cited by the Examiner. The standard is not that the claimed invention and the prior art products be the same or similar, but that they be identical (Marosi) or either identical or only slightly different (Ex parte Gray) in order to justify a rejection under sections 102 or 103. Mere similarities between structures have never been suggested as the basis for such rejections.

The Applicant believes that adequate discussion has been provided in the January 6, 2005 communication to allow one skilled in the art to recognize the very significant differences between product of claim 13 and the product of the '779 application. These differences are of a type that clearly show that the products are not "identical" and are not "only slightly different." The Examiner has not as of yet taken a position as to whether the structure claimed in the present application is identical or only slightly different than that discussed in the '779 application. The Applicants have gone on the record explaining carefully the differences between the claimed copolymer structure as compared to the copolymer structure described in '779. Thus, it is the Applicant's position that it is incumbent upon the Examiner to accept or reject these assertions made by the Applicant. If the Examiner rejects these assertions, then reasonable justification for such rejection must be provided in order to move this prosecution along, particularly with respect to justification as to why the structures are identical or are only slightly different.

With respect to the US '495 discussion in the Examiner's "Response to Arguments" section, the Applicant considers this discussion irrelevant due to the lack of a rejection over this reference in the present Office Action. However, the Applicant wishes to state that adequate discussion was provided in the January 6, 2005 communication to allow one skilled in the art to recognize the substantial

differences between the claimed products and the products of the '495 reference. The Applicant believes that explanation of these structural differences is adequate to establish a nonobvious difference between the claimed product and the prior art product.

Rejection under 35 U.S.C. 102(e) over '779

The Examiner has rejected claims 13 and 15 under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Application '779. The '779 application discloses many different processes for preparing various copolymers, some of which include controlled polymerization processes comprising polymerizing free radically (co)polymerizable monomers. The free radically (co)polymerizable monomers can be polymerized in the presence of an initiator having a radically transferable atom and a catalyst which participates in a reversible cycle with at least one of the initiator and a compound having a radically transferable atom.

According to the specification, a preferred process is a reverse atom transfer radical polymerization (ATRP) process. As recited by '779, a reverse ATRP process includes an initiator molecule which can be formed *in-situ* by reaction of a free radical with a redox conjugate of a transition metal compound. See paragraph [006]. Another exemplary embodiment recites a process for forming an AB block copolymer. Specifically, the block copolymer has a hydrophilic block and a more hydrophobic block that only incorporates hydrophilic monomers at low levels, leading to surfactant molecules with tunable micellular properties. See paragraph [0169].

Unlike the teachings of the '779 publication, the claimed polymer particles are prepared by the process of: i) polymerizing a first unsaturated monomer containing a hydrophilic moiety, through an ATRP process to form a first polymer; and ii) copolymerizing a second unsaturated monomer containing a hydrophobic moiety, with the first polymer in an emulsion, to form amphipathic block copolymer particles having a size range of 50-500nm and a polydispersity index in the range of 1-1.2. Thus, the claimed invention requires an ordered copolymerization process, where two completely different polymerization processes are used in sequence. In other words, the formation of a hydrophilic polymer is at least well under way (or even substantially complete) when the second hydrophobic monomer is added. This

ordered process results in a polymer that is significantly different from the polymers of the '779 application. Further, the ATRP process is utilized in preparing a controlled hydrophilic moiety-containing block, and an emulsion process is used for preparing the hydrophobic moiety-containing block. As the Examiner is aware, the order and method by which the polymer is formed dictates the resulting composition, shape, and configuration of individual polymers of the block copolymer. The Applicant has four such specific order and method requirements that influence the final configuration of the product, i.e. hydrophilic first, hydrophobic second, ATRP for hydrophilic, and emulsion for hydrophobic. For instance, forming the hydrophilic polymer through an ATRP process in the first stage produces a particular polymer particulate structure, such as a homopolymer structure or a polymer structure that includes crosslinkers or dye monomers, for example. If, at a second stage, a second hydrophobic block monomer is polymerized to the first polymer (which is already at least partially formed) via an emulsion process, the resultant polymer would be an amphipathic particle displaying a unique particle structure and characteristics that cannot be duplicated by the teachings of the '779 application. For example, the hydrophobic polymerization results in a hydrophobic block that is structured in accordance with its relationship to the hydrophilic block. Further, the hydrophilic block is at least initially polymerized without the presence of the hydrophobic monomers, thus, are not influenced in their formation as a hydrophilic block until the hydrophobic monomers are added. Thus, as the '779 application does not teach a process of forming block copolymers in accordance with the recited method, it follows that none of the products formed therein would have the same structure.

Accordingly, the instantly claimed invention is not anticipated by the cited reference, as Application '779 lacks at least one element of the instantly claimed invention. Further, there is no suggestion for modification of this reference to arrive at the claimed invention. Applicant submits that the rejection is improper and respectfully requests that it be withdrawn.

Rejection under 35 U.S.C. 103(a) over '779 in view of '794

Before discussing the obviousness rejections herein, it is thought proper to briefly state what is required to sustain such a rejection. The issue under § 103 is

whether the PTO has stated a case of *prima facie* obviousness. According to the MPEP § 2142, the Examiner has the burden and must establish a case of *prima facie* obviousness by showing some motivation in a prior art reference to modify that reference, or combine that reference with multiple references, to teach all the claim limitations in the instant application. Applicants respectfully assert the Examiner has not satisfied the requirement for establishing a case of *prima facie* obviousness in this rejection.

Claims 14 and 16 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application '779 in view of U.S. Patent No. '794. The Applicant respectfully contends that the combination of the '794 patent with the '779 application does not teach all the claim limitations and thus does not establish a *prima facie* case of obviousness. As discussed above, the '779 application does not teach a product having an identical or an only slightly different structure from the product of claim 13. Because claims 14 and 16 depend from claim 13, and because the '794 patent does not teach an identical product nor does it cure the deficiencies of the '779 application with respect to claim 13, claims 14 and 16 are also believed to be in allowable condition. As such, Applicant respectfully requests that this rejection be withdrawn as well.

CONCLUSION

In view of the foregoing, Applicant believes that claims 13-16 present allowable subject matter and allowance is respectfully requested. If any impediment to the allowance of these claims remains after consideration of the above remarks, and such impediment could be removed during a telephone interview, the Examiner is invited to telephone Susan E. Heminger at (650) 236-2738 so that such issues may be resolved as expeditiously as possible.

Please charge any additional fees except for Issue Fee or credit any overpayment to Deposit Account No. 08-2025.

Dated this 21day of June, 2005.

Respectfully submitted,

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